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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/484,611	01/18/2000	Feisal Daruwalla	CISCP122/1242	9892
22434	7590	02/16/2005	EXAMINER	
BEYER WEAVER & THOMAS LLP			PHAN, MAN U	
P.O. BOX 70250			ART UNIT	PAPER NUMBER
OAKLAND, CA 94612-0250			2665	

DATE MAILED: 02/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/484,611	Applicant(s) DARUWALLA ET AL.	
	Examiner Man Phan	Art Unit 2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 and 37-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 and 37-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>080204</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is in response to applicant's 12/10/2004 Amendment in the application of Daruwalla et al. for the "Method for a cable modem to rapidly switch to a backup CMTS" filed 01/18/2000. This application is a Request for Continued Examination (RCE) under 37 C.F.R. 1.114 filed on December 10, 2004. The proposed amendment to the claims has been entered and made of record. Claims 1, 11, 13, 19, 25, 38, 43 have amended, and claim 46 has been added. Applicant's amendment to the pending claims have been considered but are moot in view of the new ground(s) of rejection, and will be examined as discussed below. Claims 1-31 and 37-46 are pending in the application.

Claim Rejections - 35 USC ' 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 11 recites the limitation "the cable modem" in line 15.

There is insufficient antecedent basis for these limitations in the claim.

Claim Rejections - 35 USC ' 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior

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art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-8, 10-13, 15-19, 21-27, 29-39, 41-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Unger et al. (US#6,230,326) in view of Blahut et al. (US#6,065,061).

With respect to claims 13, 16 and 38-40 and 43, Unger et al. (US#6,230,326) disclose a method and system for providing load sharing and redundancy in a network, according to the essential features of the claims. Unger et al discloses a method of providing backup service to a group of cable modem on a cable network having a working CMTS providing service to the group of cable modems and having a protecting CMTS available to take over service to the group of cable modems, the method comprising: receiving information about the status of the group of cable modems (see Fig. 1 elements (104a-104b) from the working CMTS (see element 103) to thereby synchronize the protecting CMTS (see element 102) to the working CMTS in response to a change in configuration data pertaining to the group of cable modems associated

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with the working CMTS, or discovery of a new protecting CMTS (see col. 1, lines 30-50 and col.3, lines 2-35); determining that the protecting CMTS (102) is to take over service to the group of cable modems (see fig.3 and col.4, lines 5-35); and taking over service to the group of cable modems (see col.4, lines 5-35). Unger et al. do not disclose expressly wherein the cable modem is informed of an upstream channel of the protection CMTS. However, Unger et al. suggest that the upstream management channel being designated as a channel to be used by a cable modem for transmitting an initialization request to the cable modem termination system, and the cable modem termination system receiving the initialization request from the cable modem via the upstream management channel (Col. 3, lines 7-13 and Col. 6, lines 50 plus). In the same field of endeavor, Blahut et al. (US#6,065,061) provide a fall-back technique for use in any IP-based data communications architecture. In particular, a routing table specifies alternate IP connections in the event of a service interruption. A user accesses the Internet through a hybrid data communications system architecture in which upstream service (e.g., frequency, power levels, etc.) is provided via the local loop of the PSTN and downstream service is provided via a CATV network. The Cable Modem Data Termination system (CMTS) includes a routing table. Upon detection of a CATV service interruption, the CMTS re-routes IP traffic destined for a first destination IP address (IP1) associated with the user to a different IP address (IP2), or endpoint, as a function of the routing table. In this instance, the IP2 address is associated with equipment that provides downstream IP service to the user via the local loop of the PSTN (See Fig. 1; Col. 4, lines 52 plus). Blahut further teaches in Fig. 3 a flow chart illustrated the switched fallback in CMTS, in which at step 305, CMTS 120 detects a service interruption with respect to the downstream cable link to CM 115. (Cable Network

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management/monitoring functions are well-known and will not be described herein). Following detection of the service interruption, CMTS 120 establishes an IP tunnel to CM 115 in step 310. In this example, the IP tunnel allows CMTS 120 to re-route any downstream traffic to CM 115 via the PSTN 140 (*upstream service channel*). In step 315, CMTS 120 forwards traffic via this IP tunnel to CM 115 (Col. 5; lines 7 plus).

Regarding claims 14, 40, Unger teach in a cable modem network, information is carried over a cable from a cable modem termination system (CMTS) to a plurality of cable modems (CMs). The CMs are coupled in communication with the CMTS to receive information on a so-called "downstream" channel and to communicate information to the CMTS on a so-called "upstream" channel. Particular characteristics (e.g., frequency, power levels, etc.) of the upstream channel are determined at the time the CM is initialized (Col. 1, lines 11-19).

Regarding claims 15, 17 and 41, Unger et al inherently teaches, wherein the synchronization message includes DOCSIS parameters for the cable modems of the group of cable modems.

Regarding claims 18 and 42, Unger et al inherently teaches providing service to a second group of cable modems from the protecting CMTS, wherein the protecting CMTS is designed or configured to perform routing operations.

Regarding claim 46, Unger et al inherently teaches, wherein at least one of the processors and the memory are configured or designed to take over responsibility for service to the group of cable modems upon determining that the working CMTS is or will become unavailable to service the group of cable modems.

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Regarding claims 1-12 and 25-31, 37, they are method claims corresponding to the apparatus claims 13-18 and 38-43, 46 above. Therefore, claims 1-12, and 25-31, 37 are analyzed and rejected as previously discussed with respect to claims 13-18 and 38-43, 46.

With respect to claims 19-24, These claims differ from claims Unger et al. in view of Blahut et al. in that the claims recited a computer program product for performing the same basis of steps and apparatus of the prior arts as discussed in the rejection of claims above. It would have been obvious to a person of ordinary skill in the art to implement a computer program product in Unger et al. in view of Blahut et al. for performing the steps and apparatus as recited in the claims with the motivation being to provide the efficient enhancement to the protection CMTS, and easy to maintenance, upgrade.

One skilled in the art would have recognized the need for effectively and efficiently providing redundancy for critical headend components of digital cable networks, and would have applied Blahut's novel use of the switched fallback technique using upstream channel of the protection CMTS into Unger's teaching of backup service to a group of cable modem on a cable network. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Blahut's IP based network architecture for cable TV access with switched fallback into Unger's method and apparatus for initialization of a cable modem with the motivation being to provide a method and apparatus for providing redundancy in shared access networks.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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The Daruwalla et al. (US#6,839,829) is cited to show the routing protocol based redundancy design for shared-access networks.

The Kanekarr et al. (US#6,751,191) is cited to show the load sharing and redundancy scheme.

The Hebsgaard et al. (US#6,760,316) is cited to show the method and apparatus for the synchronization of multiple cable modem termination system devices.

The Fijolek et al. (US#6,553,568) is cited to show the methods and systems for service level agreement enforcement on a data over cable system..

The Fijolek et al. (US#6,577,642) is cited to show the methods and systems for virtual network administration with a data over cable system..

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Phan whose telephone number is (571) 272-3149. The examiner can normally be reached on Mon - Fri from 6:00 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3988.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

8. ***Any response to this action should be mailed to:***

Commissioner of Patents and Trademarks

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Washington, D.C. 20231

or faxed to: (703) 872-9314, (for formal communications intended for entry)

Or: (703) 305-3988 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2021 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at toll free 1-866-217-9197.

Mphan

02/15/2005.


MAN U. PHAN
PRIMARY EXAMINER